



[SaturnFans.com Forums](#) > [Categories](#) > [How-To Library](#)
Inspecting DIFF PIN- no transaxle disassembly needed

Welcome, Zeebins.
 You last visited: 01-22-2020 at 06:58 PM
[Private Messages](#): Unread 0, Total 20.

[User CP](#) [FAQ](#) [Members List](#) [Groups](#) [Calendar](#) [Chat Room](#) ▼ [New Posts](#) [Search](#) ▼ [Quick Links](#) ▼ [Log Out](#)


 Google Custom Search

 Search SaturnFans.com

[Advanced Forum Search](#) | [Advanced Photo Search](#)

01-07-2006, 08:17 PM

#1

[wolfman](#)
 Super Member

 Join Date: Jun 2002
 Location: Texas
 Posts: 12,066
[wolfman's Photos](#)

Inspecting DIFF PIN- no transaxle disassembly needed

As many of you know by now, the open differential in "S" series transaxles can have issues with it's DIFF pin. There IS a way to give it a basic visual check WITHOUT removing the transaxle or doing any major disassembly.

Proceed as follows:

Jack up the FRONT of the car until BOTH front wheels are off the ground and support it with jack stands.

Set the PARKING BRAKE and CHOCK THE REAR WHEELS!

Open the hood and locate the VSS (Vehicle Speed Sensor)My USER GALLERY has PICTURES of where this is on BOTH manual and automatics..

Unplug the VSS electrical connector and unscrew the VSS from the transaxle.

Place the transmission (manual OR automatic) in **NUETRAL**

Shine a **BRIGHT** flashlight into the VSS mounting hole at about a 45 degree toward the PASSENGER SIDE of the car.

While looking into the VSS mounting hole with your flashlight (at about a 45 degree angle) have an assitant SLOWLY turn the driver's side wheel in either direction. As he (or she) does, the DIFF piin will come into view. It will appear as a SHINEY round silver circle in the GREYISH cast housing that is rotating before your eyes.

Have you assitant continue to SLOWLY turn the wheel until you see the DIFF pin TWICE (both ends)

What to look for:

The DIFF pin SHOULD be FLUSH with the housing on BOTH ends. If you discover that it is either protruding slightly or slightly below the casting, the retaiing roll pin has most likely FAILED and you are living on VERY borrowed time. 🙄

If it IS flush on BOTH ENDS, you are fine. 🍀

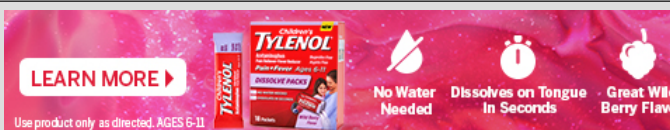
This is not all bad news however. **STOP DRIVING THE CAR!** If you remove and disassemble the transaxle now, you are looking at a simple repair (I recommend WELDING the pin to the housing...again see my user gallery) and not transaxle replacement. Push your luck however, and you can COUNT on catastrophic failure that will require the replacement of the transaxle.

...

Old Saturns never die, people KILL them, so check your damn oil!
 "Unthinking respect for authority is the greatest enemy of truth." Albert Einstein

REWARD EXCELLENCE!
☒ Rate the quality of this post and help *wolfman* reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!

SaturnFans.com Sponsored Links



01-15-2006, 02:01 AM #2 geartooth94 Master Member  Join Date: Mar 2003 Location: Allentown, PA Posts: 3,879 geartooth94's Photos	Re: Inspecting DIFF PIN- no transaxle disassembly needed i wonder if a supremely expert welder could get in there WHILE THE TRANS IS STILL IN THE CAR and weld that little bugger in there? how big is the hole that contains the VSS ? ... 1996 Dodge Avenger ES: 2.5L V6 REWARD EXCELLENCE!  Rate the quality of this post and help geartooth94 reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!   
01-20-2006, 08:53 PM #3 2SL's&1SC Member Join Date: Apr 2000 Location: Hamilton, Ohio Posts: 204	Re: Inspecting DIFF PIN- no transaxle disassembly needed Wolfman: If the pin isn't flush, would it be possible to tap it back from the other side and apply some J B Weld to help hold it? REWARD EXCELLENCE!  Rate the quality of this post and help 2SL's&1SC reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!   
01-21-2006, 12:04 PM #4 myoung Advanced Member  Join Date: Feb 2003 Posts: 955 myoung's Photos	Re: Inspecting DIFF PIN- no transaxle disassembly needed As someone who's blown two of these up, one welded, I wouldn't try either of the workarounds proposed above. The welded pin was only surface welded, and the welds broke, thus causing my second failure. As always, your results may vary, but I caution against this. The third transmission, which is in the (wrecked) car right now, we tried a little different welding approach. We tapered both edges of the pin, and then also ground around the entry holes in the actual diff, to create a channel of sorts around the pin. This gave the weld a little more strength. While there's no way to say definitively that it is going to hold up better, the transmission is still intact. I know you guys are looking for workarounds to dismantling the trans, but if you do it now, and do it right, you save yourself \$300+ on a new (used) transmission. REWARD EXCELLENCE!  Rate the quality of this post and help myoung reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!   
01-21-2006, 12:59 PM #5 Saturn-Eh! Senior Member  Join Date: Jul 2003 Location: The Great White North Posts: 1,715 Saturn-Eh!'s Photos	Re: Inspecting DIFF PIN- no transaxle disassembly needed Quote: Originally Posted by geartooth94 <i>i wonder if a supremely expert welder could get in there WHILE THE TRANS IS STILL IN THE CAR and weld that little bugger in there? how big is the hole that contains the VSS ?</i> Theoretically it could be done, but the only grounding point available for the welding would be through the transaxle case. the only way for the diff to conduct through the case would be through the carrier bearings, so you would risk arcing at the bearing contact patches. You would ensure that the diff pin is safe, but at the expense of severely shortened bearing life...☹ REWARD EXCELLENCE!  Rate the quality of this post and help Saturn-Eh! reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!   
06-29-2007, 05:31 PM #6 strongboy2005 Member Join Date: Nov 2006 Posts: 336	Re: Inspecting DIFF PIN- no transaxle disassembly needed When you remove the VSS is tranny fluid supposed to come out? I removed the little connector and then used an adjustable wrench to remove the large nut and tranny fluid began pouring out pretty profusely, is there something wrong or was this just not mentioned in the write-up? REWARD EXCELLENCE!  Rate the quality of this post and help strongboy2005 reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!

02-21-2011, 03:20 PM

#2

Troy35

Junior Member

Join Date: Jul 2010

Location: Tracy, CA

Posts: 27

1997 SC1

Re: Inspecting DIFF PIN- no transaxle disassembly needed

I was wondering if anybody would answer the last guy's question from way back when.....do you need to drain the fluid in the transaxle before removing the VSS? I would like to do this but the fluid in the transaxle is fairly fresh and I don't want to waste it if it's not necessary.

REWARD EXCELLENCE!

Rate the quality of this post and help *Troy35* reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!

02-21-2011, 03:36 PM

#8

OU812

Advanced Member

Join Date: Nov 2005

Location: Bronx, New York City

Posts: 689

1996 SL1

Re: Inspecting DIFF PIN- no transaxle disassembly needed

Quote:

Originally Posted by **Troy35** 

I was wondering if anybody would answer the last guy's question from way back when.....do you need to drain the fluid in the transaxle before removing the VSS? I would like to do this but the fluid in the transaxle is fairly fresh and I don't want to waste it if it's not necessary.

Richpin has a video on youtube inspecting the diff pin, check it out.

REWARD EXCELLENCE!

Rate the quality of this post and help *OU812* reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!

04-28-2011, 04:01 AM

#9

keithreed

Junior Member

Join Date: Apr 2011

Posts: 14

Re: Inspecting DIFF PIN- no transaxle disassembly needed

The instructions here are kinda good but I still had to consult the videos before I was able to do it properly.

REWARD EXCELLENCE!

Rate the quality of this post and help *keithreed* reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!

post reply

[« Previous Thread](#) | [Next Thread »](#)

Quick Reply

Message:

Please click one of the Quick Reply icons in the posts above to activate Quick Reply.

Options

☐ Quote message in reply?

☒ Show your signature

Post Quick Reply

Go Advanced

Currently Active Users Viewing This Thread: 1 (1 members and 0 guests)

[Zeebins](#)

Posting Rules

Forum Jump

How-To Library

Go

www.saturnfans.com/forums/showthread.php?t=68374

3/4

Posting Rules

You **may not** post new threads

You **may** post replies

You **may** post attachments

You **may** edit your posts

BB code is **On**

Smilies are **On**

[IMG] code is **On**

HTML code is **Off**

[Forum Rules](#)

Similar Threads				
Thread	Thread Starter	Forum	Replies	Last Post
Diff Pin...	mk43	S-Series Tech	3	11-01-2007 05:57 AM
Differential Pin (DIFF PIN) Inspection	richpin06	S-Series Tech	4	03-21-2007 10:30 PM
Is there a way to tell if your diff pin is going??	bryank930	S-Series General	2	02-12-2006 03:25 AM
Diff Pin how to?	alfieferenzo84	S-Series General	5	11-02-2005 01:05 PM
Diff. Pin	sc2095	S-Series Tech	17	04-01-2004 02:48 PM

All times are GMT -5. The time now is 12:26 AM.

Search SaturnFans.com

[Advanced Forum Search](#) | [Advanced Photo Search](#)